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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,668	12/06/2001	Ian A. W. Bell	2001L007	8684

7590 05/30/2003

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[REDACTED] EXAMINER

MCAVOY, ELLEN M

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1764

DATE MAILED: 05/30/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/010,668	BELL ET AL.
	Examiner Ellen M McAvoy	Art Unit 1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 March 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 3-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 3-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3-24 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Meinhardt et al (4,234,435).

Applicants' arguments filed 24 March 2003 have been fully considered but they are not persuasive. As set forth in the previous office action, Meinhardt et al ["Meinhardt] disclose carboxylic acid acylating agents derived from polyalkylenes such as polybutenes, and a dibasic, carboxylic reactant such as maleic or fumaric acid or certain derivatives thereof. The acylating agents are characterized in that the polyalkenes from which they are derived have a M_n value of about 1300 to about 5000 and a M_w/M_n value of about 1.5 to about 4. See column 5, lines 55-65. The acylating agents are further characterized by the presence within their structure of at least 1.3 groups derived from the dibasic, carboxylic reactant for each equivalent weight of the groups derived from the polyalkene. The acylating agents can be reacted with polyethylene polyamines and polyols to produce derivatives useful per se as lubricant additives or as intermediates to be subjected to post-treatment with various other compounds including boron oxide and boron acids. See column 4, lines 24-50.

Applicants argue that Meinhardt fails to suggest that those specific high molecular weight materials having simultaneously a functionality within the limited range of greater than 1.3 to

less than 1.7, and a molecular weight distribution within the narrow range of 1.5 to 2.0 will provide any significant benefit over similar dispersants outside the scope of the present claims. This is not deemed to be persuasive because Meinhardt does prefer values within these claimed ranges. The functionality or number of succinic groups for each equivalent weight of substituent group in Meinhardt is minimally 1.3, and preferably 1.4, and especially preferred 1.5. See column 9, lines 3-12. This minimum value taught by Meinhardt as acceptable is within the limited range of 1.3 to 1.7 of the claims. With respect to M_n , Meinhardt teaches a preferred range of from about 1500 to about 2800 which is overlapping with the claimed range of about 1800 to about 3000. The claimed M_w/M_n of from about 1.5 to about 2.0 includes the minimum value of 1.8, preferably 2.0, taught by Meinhardt for M_w/M_n . See column 9, lines 37-50.

Applicants point to the results presented in Table 2 and argue that raising the functionality of a dispersant, from 1.0 to 1.8, results in a deterioration in the piston cleanliness which differs from what is expected. Applicants argue that the criticality of the 1.3 to less than 1.7 range, especially the less than 1.7 upper limit, is clearly seen by comparing inventive oils 5 (1.4) and 6 (1.6) to comparative oil 4 (1.8). This is not deemed to be persuasive since, as set forth above, Meinhardt prefers a minimum value of 1.4 for functionality and because only one value outside the critical range was tested. It is not clear if dispersants with functionalities higher than 1.8 result similarly in piston cleanliness. The examiner is of the position that the results presented are far too limiting to broadly conclude upon the criticality of the claimed ranges over the prior art dispersants. Thus, the examiner maintains the position that Meinhardt clearly meets the limitations of the claims.

The rejection of claims 1 and 3-24 under 35 USC 103(a) over Emert et al (5,756,428) is withdrawn in view of applicants' amendment to claim 1.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

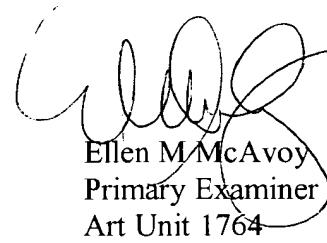
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M McAvoy whose telephone number is (703) 308-2510. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Calderola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Application/Control Number: 10/010,668
Art Unit: 1764

Page 5

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Ellen M. McAvoy
Primary Examiner
Art Unit 1764

EMcAvoy
May 29, 2003